PRODUCTION OF CHALCOGENIDE GLASS CONTAINING RARE EARTH METAL ION

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Inventor: FUJIURA KAZUO; OISHI YASUTAKE
Applicant: NIPPON TELEGRAPH & TELEPHONE
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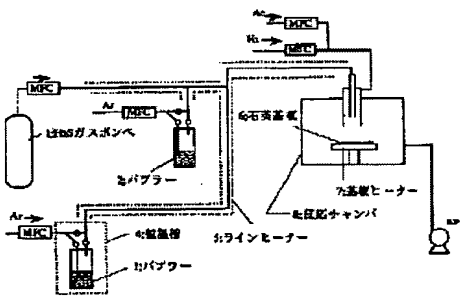
Abstract of **JP6122523**

PURPOSE:To obtain a glass having low transmission loss and easily controllable fiber structure by mixing a glass-forming gas with a alpha-diketone complex of a rare earth element and reacting in vapor phase or on a substrate. CONSTITUTION:Two or more kinds of gases selected from halides, hydrides, organometallic compounds, alkoxides and beta-diketone complexes of S, Se, Te, As, P, Sb, Ga, Si, Al and Ge are mixed with gas of a beta-diketone complex of a rare earth element and the gases are made to react with each other in vapor phase or on a substrate to obtain the objective glass. For example, AsCl3 (in a bubbler 2), H2S and a beta-diketone complex of Pr (in a bubbler 3) are supplied through an MFC (mass flow controller) to a reaction chamber 8 containing a quartz substrate 6 heated at a prescribed temperature (e.g. 200-300 deg.C) with a substrate heater 7 and the components are made to react with each other at about 250 deg.C under a pressure of about 100Torr for about 1hr to form a glass film having a thickness of about 100mum on the quartz.



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